

# Vacuum Poppet Valves

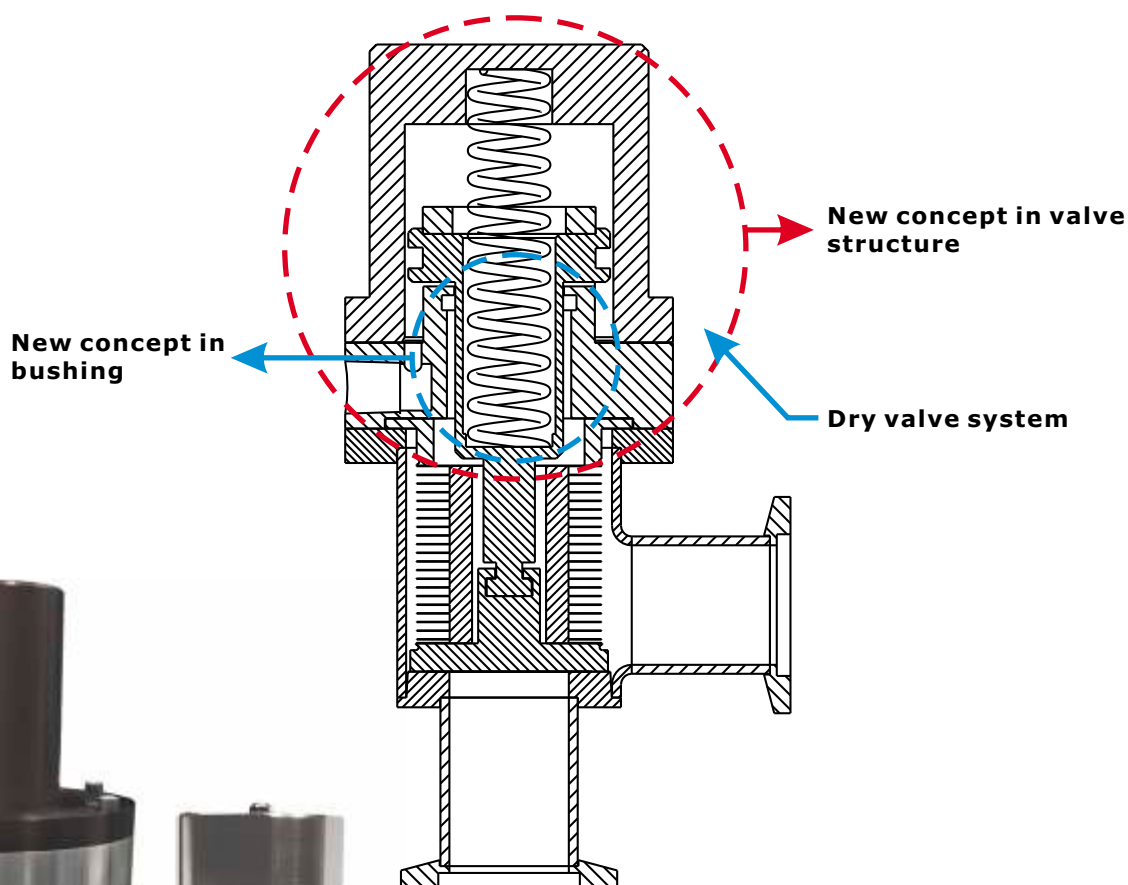
## Product Introduction

Isolation Poppet Valves are usually installed in roughing or for line system. Most of application may connect to exhausting system, there is potential risk for contamination the chambers.

Special design Dry valve brings the safety to protect chambers when pumping system in back streaming. The poppet valves use edge welded bellows, and provide highest conductance with small footprint design.

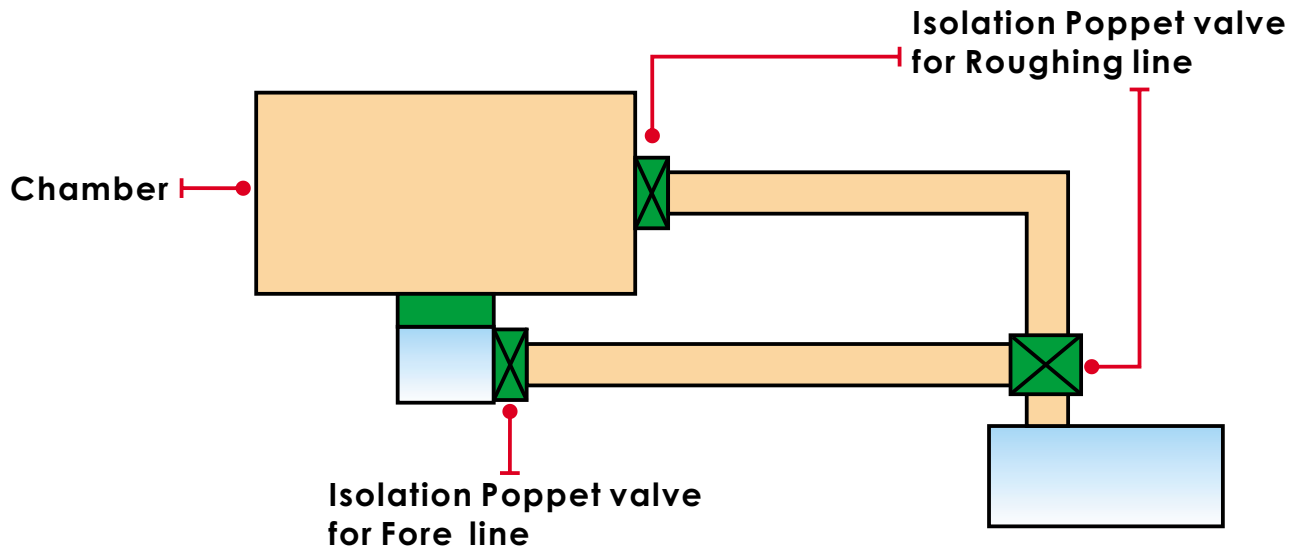
## Product Features

- Spring return to closed, available from 3/4" orifice to 2".
- High Purity (Dry valve system), non-metal shaft bushing, less particle generation.
- Low profile design.
- Dry valve system, self lubricated mechanism, reducing particle generation.

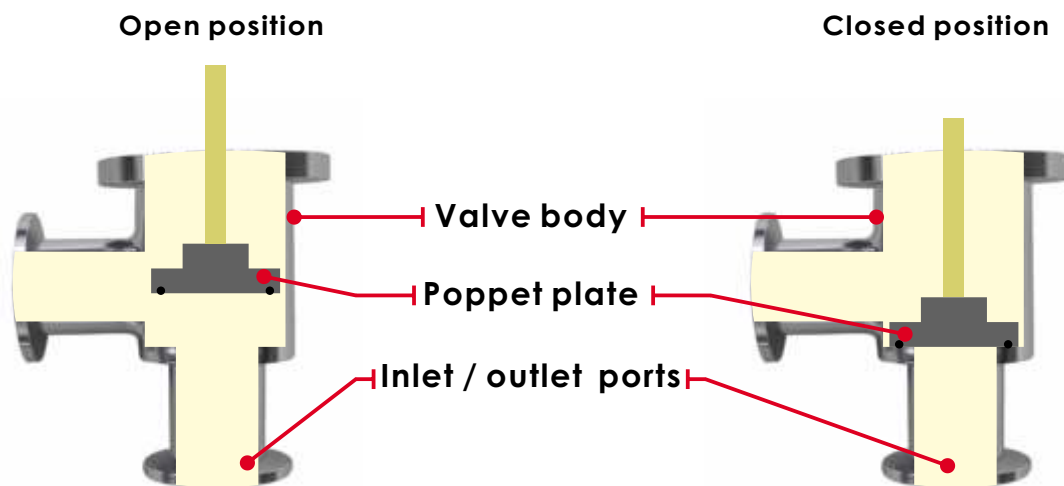


# Product's Application

Poppet valves in the roughing & For line.

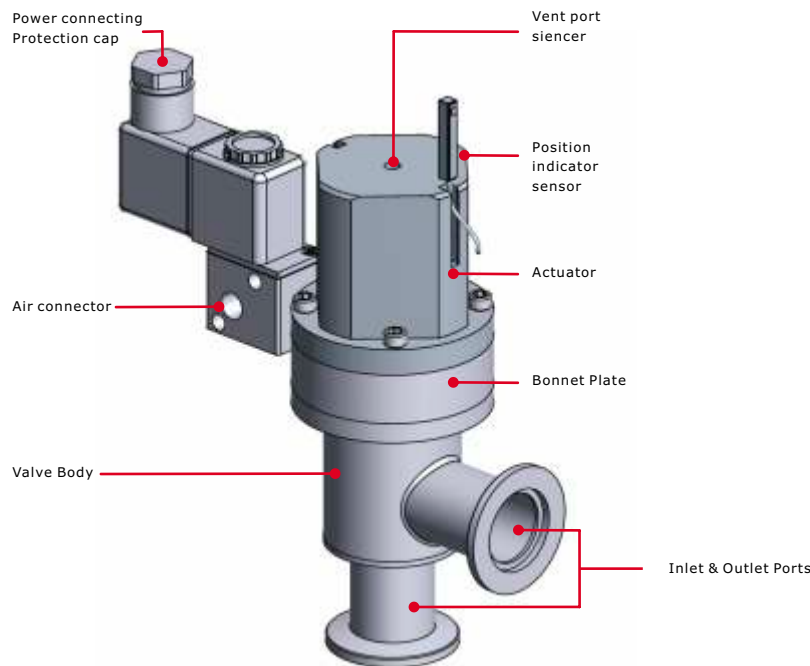


Valve's operation Concept



# Part of Valve

## Parts for Poppet Valves- Single acting



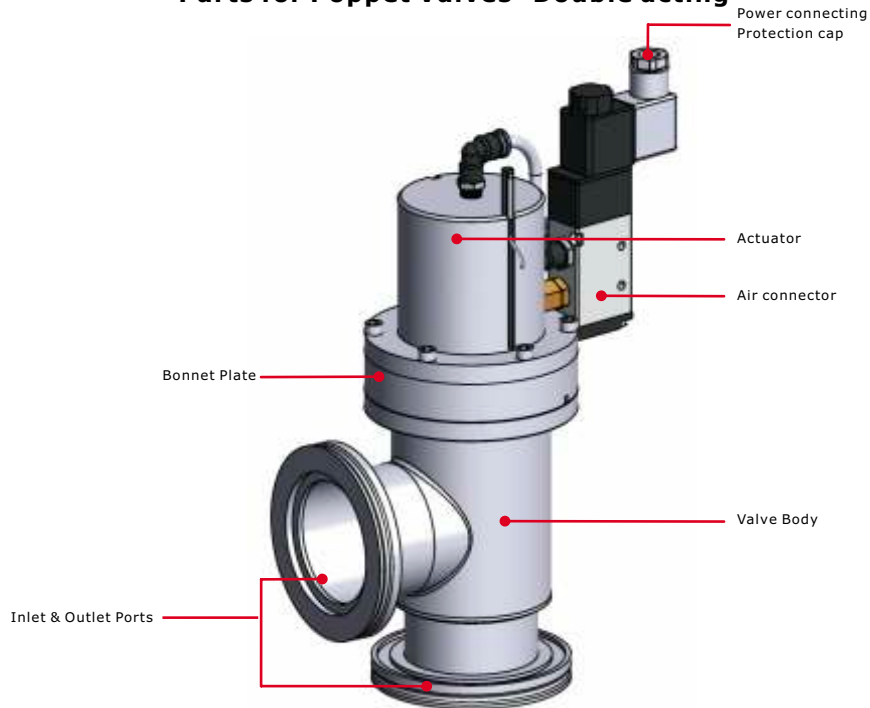
## Technical Data for Poppet Angle / Inline valves

	Ultra High Vacuum	High Vacuum
<b>Feedthrough</b>	Welded Bellows in AM350	Welded Bellows in Am350
<b>Gate seal</b>	FKM o-ring ( Optional for FFKM)	FKM o-ring ( Optional for FFKM)
<b>Bonnet seal</b>	OFHC metal gasket	FKM
<b>Operate pressure range</b>	2,500 Torr ~ $1 \times 10^{-10}$ Torr 2,000 mbar ~ $1.33 \times 10^{-10}$ mbar 200 kPa ~ $1.13 \times 10^{-9}$ kPa	2,500 Torr ~ $1 \times 10^{-8}$ Torr 2,000 mbar ~ $1.33 \times 10^{-8}$ mbar 200 kPa ~ $1.13 \times 10^{-7}$ kPa
<b>Leak rate</b>	$1 \times 10^{-10}$ Torr l/s, He $1.33 \times 10^{-10}$ mbar l/s, He $1.13 \times 10^{-9}$ kPa	$1 \times 10^{-9}$ Torr l/s, He $1.33 \times 10^{-9}$ mbar l/s, He $1.13 \times 10^{-8}$ kPa
<b>Cycle life</b>	>1,000,000 Cycles	
<b>Temperature for Valve body</b>	250°C(482°F) Open, 200°C(392°F) Closed	
<b>Temperature for Actuator</b>	100°C(212°F)	
<b>Temperature for solenoid / position indicator</b>	80°C 176°F	
<b>Bake Temperature</b>	200°C (392°F) for FKM gate seal	100°C (212°F) for FKM gate seal
<b>Valve body material</b>	SUS304/L (Optional for SUS316/L)	
<b>Mechanism material</b>	SUS304/L	
<b>Actuator material</b>	Aluminum	
<b>Mounting position</b>	Any	

### Valve's operation data

<b>Pneumatic operating pressure</b>	4 bar ~ 5.5 bar 400 kpa ~ 550 kpa 58 psi ~ 80 psi
<b>Position indicator (Optional)</b>	Optional Magnetic sensor with wire end
<b>Solenoid (optional)</b>	Optional for 24V DC, standard
<b>Failure protection (Build in)</b>	Build in Spring closed for KF16, KF25, KF40, KF50, CF1.33", CF2.75

### Parts for Poppet Valves- Double acting



#### Valve's Performance data

	KF16/CF1.33"	KF25	KF40/CF2.75"	KF50	ISO-K63/CF4.5"
Maximum differential pressure against gate	2,025 Torr 2,700 mbar 270 kpa	1,800 Torr 2,400 mbar 240 kpa	1,725 Torr 2,300 mbar 230 kpa	1,500 Torr 2,000 mbar 200 kpa	2,925 Torr 3,900 mbar 390 kpa
Maximum differential pressure at opening	1,500 Torr 2,000 mbar 200 kpa				
Pneumatic valve open / close time	0.5(s)	0.6(s)	0.8(s)	0.9(s)	0.7(s)
Valve's Condantance Angle type (Molecular flow)	6(l/s)	15(l/s)	48(l/s)	82(l/s)	170(l/s)
Valve's Condantance Inline type (Molecular flow)	5(l/s)	12(l/s)	44(l/s)	66(l/s)	135(l/s)

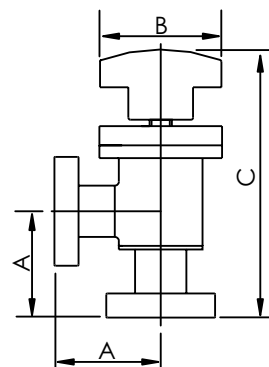
	ISO-K 80	ISO-K 100/CF6"	ISO-K 160/CF8"	ISO-K 200	ISO-K 250
Maximum differential pressure against gate	2,925 Torr 3,900 mbar 391 kpa	2,925 Torr 3,900 mbar 392 kpa	3,300 Torr 4,400 mbar 440 kpa	3,300 Torr 4,400 mbar 441 kpa	3,300 Torr 4,400 mbar 442 kpa
Maximum differential pressure at opening	1,500 Torr 2,000 mbar 200 kpa				
Pneumatic valve open / close time	0.7(s)	0.8(s)	1.5(s)	2.5(s)	2.8(s)
Valve's Condantance Angle type (Molecular flow)	220(l/s)	490(l/s)	1090(l/s)	1,600(l/s)	2,650(l/s)
Valve's Condantance Inline type (Molecular flow)	184(l/s)	406(l/s)	N/A	N/A	N/A

# Product Order Information

## Manual wheel Angle poppet valve, UHV, CF Flange

Catalogue PN	Tube OD	A	B	C
MAV-UHV-CF-133	3/4"	41	60	124
MAV-UHV-CF-275	1-1/2"	63	60	162

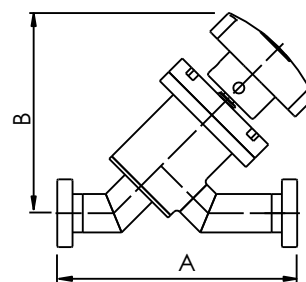
\* Bonnet by OFC Gasket sealed



## Manual wheel Inline poppet valve, UHV, CF Flange

Catalogue PN	Tube OD	A	B
MIV-UHV-CF-133	3/4"	119	100
MIV-UHV-CF-275	1-1/2"	133	123

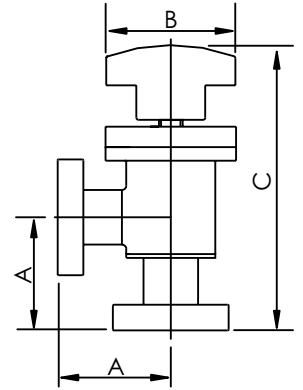
\* Bonnet by OFC Gasket sealed



### Manual wheel Angle poppet valve, HV, CF Flange

Catalogue PN	Tube OD	A	B	C
MAV-HV-CF-133	3/4"	41	60	124
MAV-HV-CF-212	1"	50	60	131
MAV-HV-CF-275	1-1/2"	63	60	162
MAV-HV-CF-338	2"	72	60	193

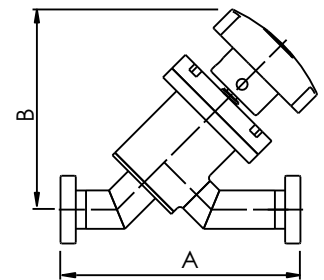
\* Bonnet by FKM O-Ring sealed



### Manual wheel Inline poppet valve, HV, CF Flange

Catalogue PN	Tube OD	A	B
MIV-HV-CF-133	3/4"	119	100
MIV-HV-CF-212	1"	107	97
MIV-HV-CF-275	1-1/2"	133	123
MIV-HV-CF-338	2"	182	152

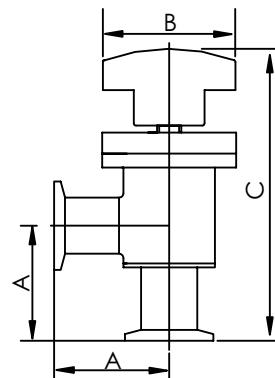
\*Bonnet by FKM O-Ring sealed



# Product Order Information

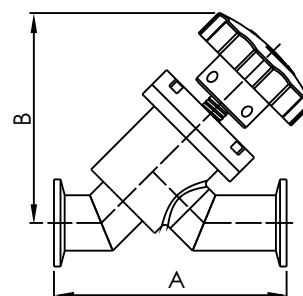
## Manual wheel Angle poppet valve, HV, KF Flange

Catalogue PN	Tube OD	A	B	C
MAV-HV-KF-16	3/4"	40	60	123
MAV-HV-KF-25	1"	50	60	130
MAV-HV-KF-40	1-1/2"	65	60	164
MAV-HV-KF-50	2"	70	60	191



## Manual wheel Inline poppet valve, HV, KF Flange

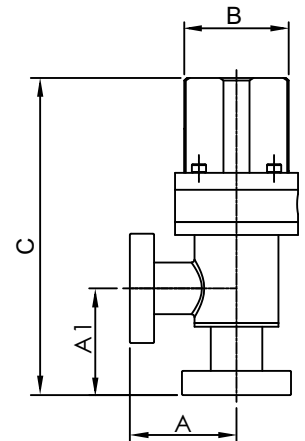
Catalogue PN	Tube OD	A	B
MIV-HV-KF-16	3/4"	102	100
MIV-HV-KF-25	1"	107	97
MIV-HV-KF-40	1-1/2"	130	123
MIV-HV-KF-50	2"	178	152



**Pneumatic Angle poppet valve, UHV, CF Flange  
Single acting**

Catalogue PN	Tube OD	A	A1	B	C
PAV-UHV-CF-133	3/4"	41	41	52	147
PAV-UHV-CF-275	1-1/2"	63	63	65	174

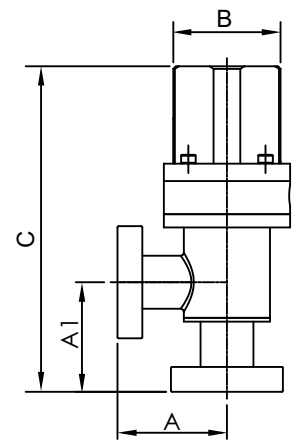
\* Bonnet by OFC Gasket sealed



**Pneumatic Angle poppet valve, UHV, CF Flange  
Double acting**

Catalogue PN	Tube OD	A	A1	B	C
PAV-UHV-CF-450	2-1/2"	91	91	70	251
PAV-UHV-CF-600	4"	113	113	89	342

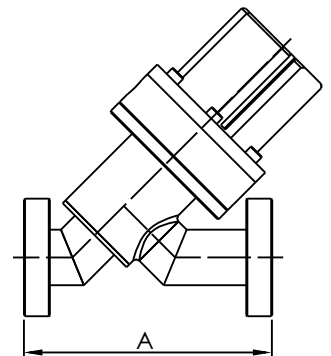
\*Bonnet by OFC Gasket sealed



**Pneumatic Inline poppet valve, UHV, CF Flange  
Single acting**

Catalogue PN	Tube OD	A
PIV-UHV-CF-133	3/4"	119
PIV-UHV-CF-275	1-1/2"	133

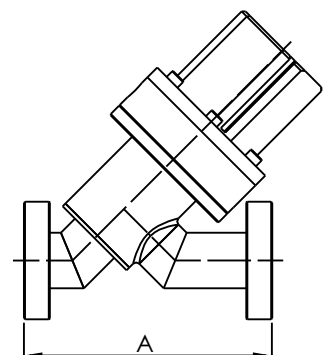
\* Bonnet by OFC Gasket sealed



**Pneumatic Inline poppet valve, UHV, CF Flange  
Double acting**

Catalogue PN	Tube OD	A
PIV-UHV-CF-450	2-1/2"	216
PIV-UHV-CF-600	4"	355

\* Bonnet by OFC Gasket sealed

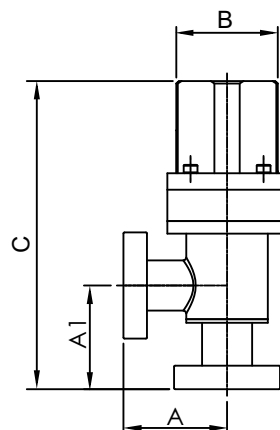




# Product Order Information

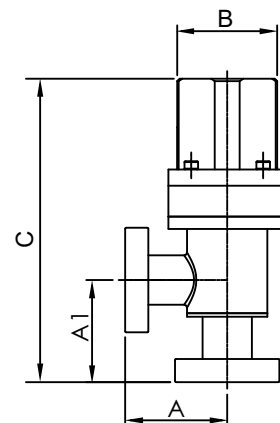
## Pneumatic Angle poppet valve, HV, CF Flange Single acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-CF-133	3/4"	41	41	52	147
PAV-HV-CF-212	1"	50	50	52	154
PAV-HV-CF-275	1-1 /2"	63	63	65	174
PAV-HV-CF-338	2"	72	72	67	234



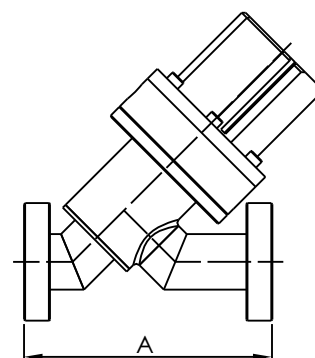
## Pneumatic Angle poppet valve, HV, CF Flange Double acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-CF-450	2-1/2"	91	91	70	251
PAV-HV-CF-600	4"	113	113	89	342
PAV-HV-CF-800	6"	165	165	140	469



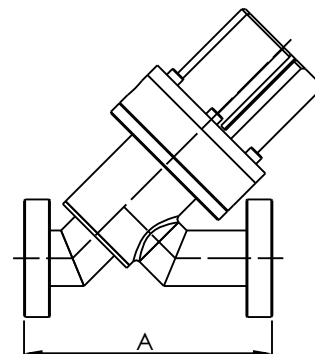
## Pneumatic Inline poppet valve, HV, CF Flange Single acting

Catalogue PN	Tube OD	A
PIV-HV-CF-133	3/4"	119
PIV-HV-CF-212	1"	107
PIV-HV-CF-275	1-1 /2"	133
PIV-HV-CF-338	2"	182



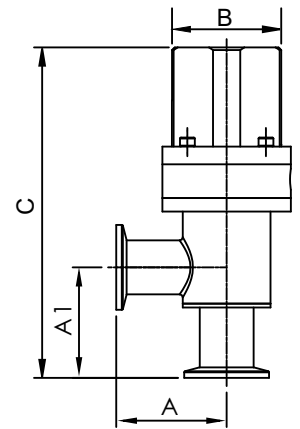
## Pneumatic Inline poppet valve, HV, CF Flange Double acting

Catalogue PN	Tube OD	A
PIV-HV-CF-450	2-1 /2"	216
PIV-HV-CF-600	4"	355
PIV-HV-CF-800	6"	394



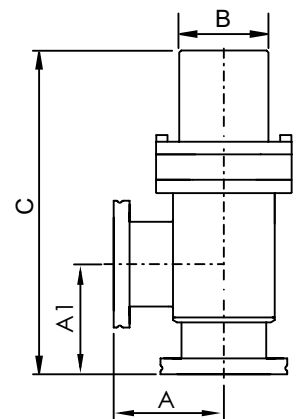
**Pneumatic Angle poppet valve, HV, KF Flange  
Single acting**

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-KF-16	3/4"	40	40	52	147
PAV-HV-KF-25	1"	50	50	52	154
PAV-HV-KF-40	1-1/2"	65	65	65	176
PAV-HV-KF-50	2"	70	70	67	232



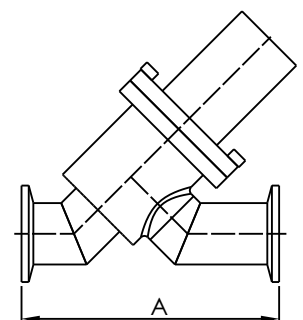
**Pneumatic Angle poppet valve, HV, ISO-K Flange  
Double acting**

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-ISOK-63	2-1/2"	88	88	70	248
PAV-HV-ISOK-80	3"	90	90	82	284
PAV-HV-ISOK-100	4"	108	108	89	338
PAV-HV-ISOK-160	6"	138	138	140	442
PAV-HV-ISOK-200	8"	178	178	140	648
PAV-HV-ISOK-250	10"	208	208	202	668



**Pneumatic Inline poppet valve, HV, KF Flange  
Single acting**

Catalogue PN	Tube OD	A
PIV-HV-KF-16	3/4"	102
PIV-HV-KF-25	1"	107
PIV-HV-KF-40	1-1/2"	130
PIV-HV-KF-50	2"	178



**Pneumatic Inline poppet valve, HV, ISO-K Flange  
Double acting**

Catalogue PN	Tube OD	A
PIV-HV-ISOK-63	2-1/2"	209
PIV-HV-ISOK-80	3"	268
PIV-HV-ISOK-100	4"	345
PIV-HV-ISOK-160	6"	381

